

# BERGABEST MCT OIL

The unrivalled active oil for  
Foods · Pharmaceuticals · Cosmetics



Esterification plant in Pasir Gudang, Malaysia

CT  
RANGE

# BERGABEST MCT OIL

Multifunctional Active Oil

- Separates
- Releases
- Lubricates
- Disperses
- Hydrophobes
- Penetrates

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## Sternchemie: the company

Established in 1958, Sternchemie became the foundation stone of the Stern-Wywiol group of companies in 1980. Our successful development started with lecithin. Sternchemie is now a company operating chiefly in special food lipids based on palm oil and phospholipids from soybeans.

Part of our core business is MCT oils. These have become synonymous with quality throughout the world under the brand name BergaBest. BergaBest is a special vegetable oil for use in foods, cosmetics and pharmaceutical products. The oil's unique characteristics and wide range of applications have given rise to striking descriptions such as "magical", "multifunctional" or "active" oil.

The basic raw materials for BergaBest are fractionated palm and coconut oils extracted by our close associates in Malaysia, the home of palm oils. Sternchemie is represented by affiliates of its own in South-East Asia, notably in Singapore, Malaysia and India. Our team of experts is on the spot. That allows us direct influence on the choice of raw materials and enables us to check

the production processes and monitor all the quality parameters.

Through our modern tank terminal in Ouderkerk, near Rotterdam, we guarantee an unbroken chain of quality assurance. Ouderkerk is both an intermediate storage facility and a refining plant. We also make up tailor-made oil compounds to customers' specifications. Constant replenishment of our stocks enables us to offer short delivery times and optimum logistics.



## Success and Competence

# WITH LIPIDS

## Stern-Wywiol Gruppe

Sternchemie is a member of the Stern-Wywiol Gruppe, a rapidly growing group of companies independent of the big organizations and specializing in "innovative food and feed ingredients".

The group is made up of independent companies operating on a decentralized basis. All the units are responsible for their own management, product development, production and marketing. This

is the key to the group's special strengths: innovative power, flexibility, and closeness to the customer.

Our advice on products revolves on applications technology. In order to offer optimum service to customers and tailor-made solutions, each company is responsible for a particular industry and type of product within the field of additives and ingredients.

## Our core activities in the food industry

<b>Sternchemie</b>	<ul style="list-style-type: none"> <li>• MCT oils</li> <li>• Red Palm Oil</li> <li>• Natural vitamin E</li> <li>• Carotene concentrate</li> <li>• Fat powder</li> </ul>	<b>HERZA Schokolade</b>	<ul style="list-style-type: none"> <li>• Functional chocolate in pieces, leaves, squares, drops and chips</li> <li>• Nougat chips, yoghurt and caramel pieces</li> </ul>
<b>Mühlenchemie</b>	<ul style="list-style-type: none"> <li>• Flour improvers</li> <li>• Vitamin and mineral premixes</li> <li>• Application consultancy</li> </ul>	<b>SternLife</b>	<ul style="list-style-type: none"> <li>• Food supplements</li> <li>• Deoiled lecithin granulate</li> <li>• Dietetic and energy drinks in powder form</li> <li>• Food for athletes</li> </ul>
<b>DeutscheBake</b>	<ul style="list-style-type: none"> <li>• Baking ingredients</li> <li>• Functional systems</li> </ul>	<b>Hydrosol</b>	<ul style="list-style-type: none"> <li>• Stabilizing systems</li> <li>• Hydrocolloids</li> </ul>
<b>SternEnzym</b>	<ul style="list-style-type: none"> <li>• Enzymes for baked products and sugar confectionery</li> </ul>	<b>SternMaid</b>	<ul style="list-style-type: none"> <li>• Contract production of food ingredients and food supplements in powder form</li> </ul>

## What is BergaBest?

BergaBest MCT Oil is a medium chain triglyceride of fractionated vegetable fatty acids, mainly caprylic and capric acid. It is colourless, neutral in odour and taste, and has a very low viscosity. BergaBest is declared in labelling as a “vegetable oil”.

BergaBest is especially valuable from the nutritional point of view: it is taken up directly by the bloodstream and transported to the liver. Because of this it is

converted into energy immediately and not stored as depot fat like the long-chain triglycerides. BergaBest is digested and absorbed independently of auxiliary substances such as bile acids.

The product does not raise the lipid or cholesterol levels in the blood. It promotes the uptake of proteins or amino acids and various minerals such as magnesium and calcium.

Multifunctional active oil

# BERGABEST MCT-OIL

## Benefits

### Chemical and physical properties of BergaBest

- Very low viscosity
- Good low-temperature stability
- Extremely low iodine value
- Very good resistance to oxidation
- Excellent resistance to polymerization
- Good solubility in alcohol

## Double role

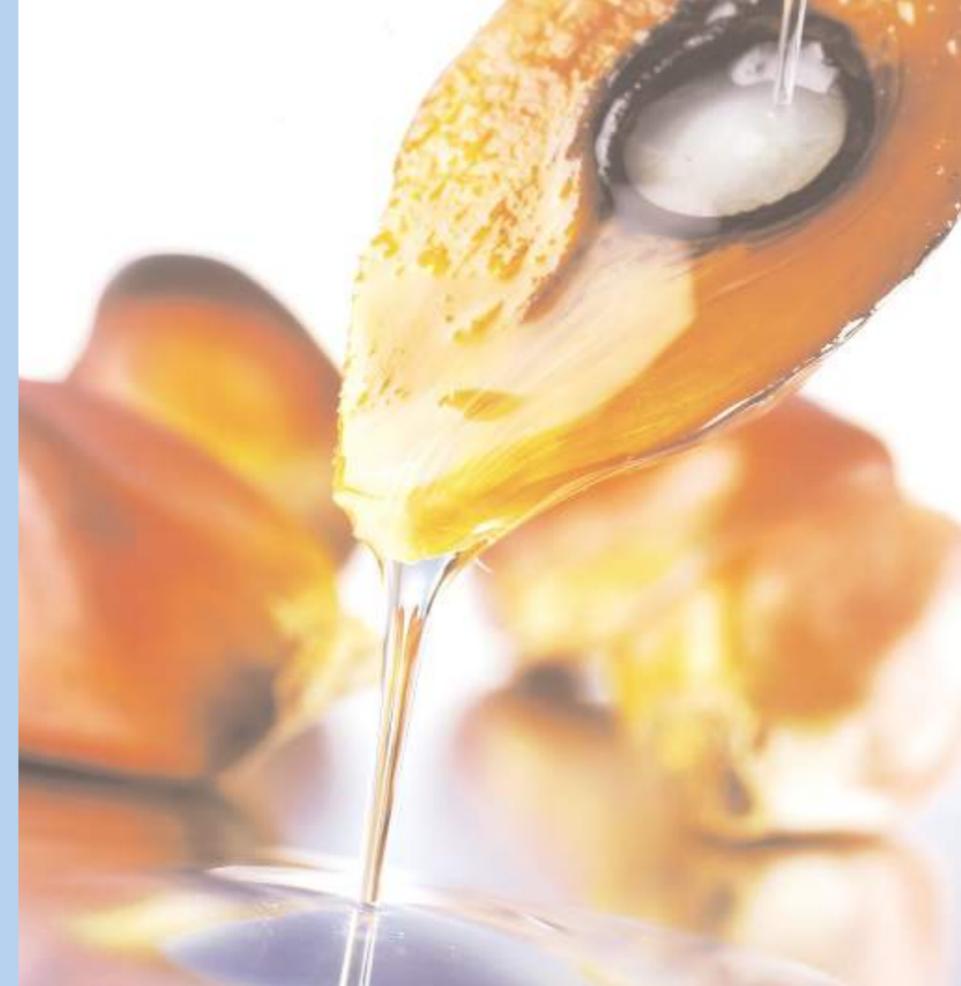
With its highly diverse properties, BergaBest is both a multifunctional active substance and a unique nutrient. This opens up a wide range of applications in the food, pharmaceuticals and cosmetics industries:

### Additive

- Solubilizer
- Releasing agent
- Surface-treating substance
- Carrier and transport vehicle
- Lubricant
- Hydrophobing agent
- Film former and protective substance
- Viscosity regulator

### Nutritional Benefit

- Direct energy
- Easy digestibility
- No storage in the depot fat
- Suitable for special diets
- Substitute for conventional oils



# FOOD INGREDIENT

## BergaBest MCT Oil – a multifunctional food ingredient

There is virtually no end to the product's applications in the food industry. The high-quality oil

- adjusts viscosity
- acts as carrier and transport vehicle
- adds gloss to surfaces
- acts as a solubilizer
- protects against drying out and discolouration
- standardizes mixtures

Products	Applications	Effects
<b>Flavourings, ethereal oils, essences</b>	Dispersion of ingredients in flavouring preparations and compounds	<ul style="list-style-type: none"> <li>• Acts as a solubilizer</li> <li>• Carries and transports fat-soluble components</li> <li>• Standardizes mixtures</li> </ul>
<b>Colorants</b>	Dispersion of ingredients in colorant mixtures, emulsions and powders	<ul style="list-style-type: none"> <li>• Acts as a solubilizer</li> <li>• Carries and transports fat-soluble components</li> <li>• Standardizes mixtures</li> </ul>
<b>Vitamin preparations</b>	Dispersion of ingredients in fat-soluble vitamin mixtures	<ul style="list-style-type: none"> <li>• Acts as a solubilizer</li> <li>• Carries and transports fat-soluble components</li> </ul>
<b>Glazing and sealing agents for sugar confectionery</b>	Basic emulsion for use on sugar confectionery (chocolate dragees, chocolates, jellies, gums, boiled sweets, panned sweets etc.)	<ul style="list-style-type: none"> <li>• Maintains the surface sheen</li> <li>• Protects against drying out</li> <li>• Protects against discolouration</li> <li>• Helps to prevent stickiness</li> </ul>
<b>Releasing agent</b>	Constituent of releasing preparations	<ul style="list-style-type: none"> <li>• Releases baked products of all kinds from moulds, tins and conveyor belts</li> <li>• Releases pasta from conveyor belts</li> </ul>
<b>Coating agents for dried fruit</b>	Coating oil for treating dried fruit	<ul style="list-style-type: none"> <li>• Forms a protective film to prevent exudation of fructose</li> <li>• Prevents the fruit from sticking together</li> </ul>
<b>Spices and condiments, herbs</b>	Dispersion of ingredients in spice and herb mixtures	<ul style="list-style-type: none"> <li>• Acts as a solubilizer</li> <li>• Disperses the individual components evenly</li> <li>• Standardizes mixtures</li> </ul>
<b>Frozen foods</b>	Coating emulsions for frozen foods and similar applications	<ul style="list-style-type: none"> <li>• Adjusts the viscosity of sauce emulsions</li> </ul>
<b>Highly viscous oils</b>	Viscosity regulator	<ul style="list-style-type: none"> <li>• Adjusts to the desired (lower) viscosity</li> </ul>
<b>Instant products</b>	Constituent of instantizing aids	<ul style="list-style-type: none"> <li>• Disperses the emulsifiers in the instantizing aid</li> </ul>
<b>Hygroscopic/spray-dried powder mixtures</b>	Hydrophobing aid	<ul style="list-style-type: none"> <li>• Ensures the free-flowing properties of the powders</li> </ul>
<b>Meat products</b>	Wetting of artificial casings in the manufacture of meat and sausage products	<ul style="list-style-type: none"> <li>• Facilitates filling of the meat mixture</li> </ul>
<b>Machine lubricant for extruders</b>	Nozzle lubricant for pellet production (e.g. for salty nibbles)	<ul style="list-style-type: none"> <li>• Forms a stable, even, natural oil film</li> </ul>
<b>Machine lubricant for food production</b>	Combined with long-chain oils or waxes and emulsifiers	<ul style="list-style-type: none"> <li>• Replaces lubricants based on mineral oils</li> </ul>

**BergaBest MCT Oil – from a nutritional point of view this oil is unbeatable. It has extremely interesting properties. BergaBest**

- provides “instant energy”, rapidly and in an easily digestible form
- goes straight to the liver without burdening the lymphatic system
- is not stored in depot fat
- is absorbed without the aid of bile acids
- does not raise blood lipid and cholesterol levels
- promotes the uptake of proteins and various minerals



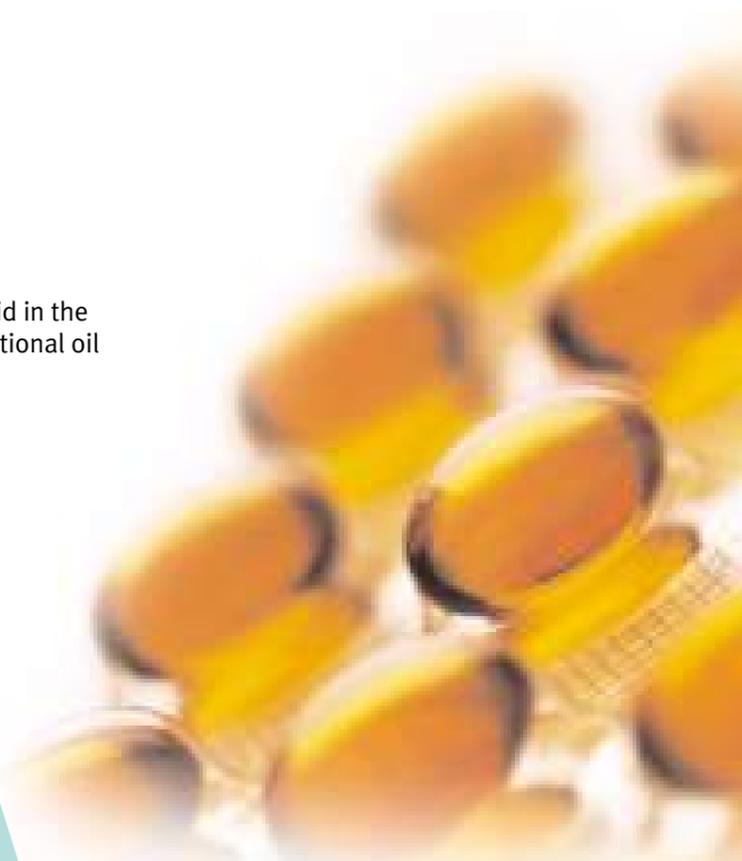
# HEALTH FOODS

<b>Baby food</b>	<ul style="list-style-type: none"> <li>• Assists the still incompletely functioning digestive systems of babies</li> <li>• Quick and simple source of energy, especially for premature babies</li> </ul>
<b>Food for athletes</b>	<ul style="list-style-type: none"> <li>• Rapidly available, valuable energy without addition to depot fat</li> <li>• Use in power, energy and protein bars, drinks, shakes, powder mixtures for drinks etc.</li> </ul>
<b>Balanced diets</b>	<ul style="list-style-type: none"> <li>• Food for special medical purposes (FSMP), i.e. slimming products made up exactly to nutrient requirements in the form of drinks, ready meals or powder mixtures</li> </ul>
<b>Enteral and parenteral feeding</b>	<ul style="list-style-type: none"> <li>• In hospitals, as an ingredient of therapeutic foods or food administered through a tube to gastro-intestinal patients</li> </ul>
<b>Long-chain edible fats, special fats</b>	<ul style="list-style-type: none"> <li>• MCT oil improves digestibility</li> </ul>

**BergaBest MCT Oil – indispensable in pharmaceutical products**

Neutral, polar, low-viscosity BergaBest is an optimum aid in the manufacture of pharmaceutical products. The multifunctional oil

- acts as a viscosity regulator
- serves as a carrier and transport vehicle
- penetrates readily
- is easily absorbed through the skin
- does not leave a greasy film
- seals the surface of coated tablets



# PHARMA

<b>Aerosols (sprays, suspensions)</b>	<ul style="list-style-type: none"> <li>• Carries and transports active substances soluble in oil</li> <li>• Promotes absorption of the active constituent</li> <li>• Forms part of the oil phase</li> </ul>
<b>Soft gelatin capsules</b>	<ul style="list-style-type: none"> <li>• Seals the surface; creates a sheen</li> <li>• Prevents the capsules from sticking together</li> <li>• Promotes dissolving of individual constituents, e.g. in encapsulated fat-soluble vitamins</li> </ul>
<b>Injections</b>	<ul style="list-style-type: none"> <li>• Carries and transports active substances soluble in oil</li> <li>• Promotes dissolving and mixing of individual constituents</li> <li>• Adjusts viscosity</li> </ul>
<b>Transdermal applications (e.g. plasters)</b>	<ul style="list-style-type: none"> <li>• The active constituent is absorbed through the skin</li> <li>• Conveys medicines to deeper layers of the skin</li> <li>• Forms part of the oil phase</li> </ul>
<b>Ointments, creams</b>	<ul style="list-style-type: none"> <li>• Spreads very readily and evenly on the skin (good penetration and spreading)</li> <li>• Sinks in quickly</li> <li>• Does not leave a greasy film if used in small doses</li> <li>• Helps to retain moisture in the skin</li> </ul>
<b>Tablets, coated tablets</b>	<ul style="list-style-type: none"> <li>• Carries and transports active substances soluble in oil</li> <li>• Seals the surface; creates a sheen</li> <li>• Prevents surfaces from sticking together</li> </ul>
<b>Suppositories</b>	<ul style="list-style-type: none"> <li>• Adjusts to the desired consistency</li> <li>• Disperses the active constituents</li> <li>• Inhibits crystallization</li> </ul>
<b>Veterinary medicine</b>	<ul style="list-style-type: none"> <li>• Thin-liquid basic ester for injections such as antibiotics</li> <li>• Carrier for insecticides and pesticides to be used externally or in concentrates of active substances for baths</li> </ul>



### BergaBest MCT oil – a wide variety of applications in the cosmetics sector

BergaBest is ideal for use in creams, aerosols, lotions, sun protection oil, lipsticks and many other cosmetic products. The oil

- acts as a viscosity regulator
- serves as a carrier and transport vehicle
- penetrates readily
- cares effectively for the skin.

Being a saturated ester, BergaBest is chemically indifferent to other ingredients of cosmetic formulations.

# COSMETICS



<b>Aerosols (sprays, perfumes)</b>	<ul style="list-style-type: none"> <li>• Carries and transports ethereal oils and active substances soluble in oil</li> </ul>
<b>Fluid and creamy products</b>	<ul style="list-style-type: none"> <li>• Controls and adjusts the viscosity of complete formulations</li> <li>• Disperses pigments</li> </ul>
<b>Ointments, creams, lotions, lipsticks</b>	<ul style="list-style-type: none"> <li>• Spreads very readily and evenly on the skin (good penetration and spreading)</li> <li>• Sinks in quickly</li> <li>• Does not leave a greasy film if used in small doses</li> <li>• Helps to retain moisture in the skin</li> <li>• Has a positive effect on the elasticity and suppleness of the skin</li> </ul>
<b>Sun protection oil, bath oil</b>	<ul style="list-style-type: none"> <li>• Carries and transports ethereal oils and active substances soluble in oil</li> <li>• Promotes dissolving and mixing of the individual constituents</li> <li>• Forms part of the oil phase</li> </ul>

# PRODUCT RANGE

Product	Form available	Fatty-Acid Composition
<b>BergaBest MCT Oil 60/40</b>	Liquid *	60 % C-8:0, 40 % C-10:0
<b>BergaBest MCT Oil 70/30</b>	Liquid *	70 % C-8:0, 30 % C-10:0
<b>BergaBest MCT-Powder</b> - fat content 70 % - soluble in water (20 °C) - carriers: Na-caseinate and maltodextrin	Powder	70 % C-8:0, 30 % C-10:0 (of total fatty acids)

\*Supplied as a kosher product on request

	BergaBest MCT Oil 60/40 *	BergaBest MCT Oil 70/30 *	BergaBest MCT Powder 70/30
Saponification value (mg KOH/g)	325 – 345	335 – 350	335 – 350
Acid value (mg KOH/g)	< 0.1	< 0.1	< 0.1
Iodine value (g <sub>I</sub> /100g)	< 1	< 0.5	< 0.5
Peroxide value (mmol/kg)	< 1	< 1	< 1
Hydroxyl value (mg KOH/g)	< 5	< 5	< 5
Turbidity point (°C)	< -5	max. 0	max. 0
Density (g/ml bei 20 °C)	0.930 – 0.960	0.910 – 0.930	0.910 – 0.930
Viscosity (mPa s bei 20 °C)	25 – 33	ca. 27	ca. 27

\*The qualities conform to the European Pharmacopoeia

### Handling, storage and packs

#### BergaBest MCT Oil

##### Resistance to oxidation

BergaBest MCT Oil consists of saturated fatty acids and is therefore extremely resistant to oxidation.

##### Storage/shelf life

BergaBest MCT Oil has a shelf life of at least two years if stored in closed containers at the proper temperature (10 °C – 30 °C). Care must be taken to ensure a controlled, low microbe count if the product is mixed with other substances. Avoid contact with water.

##### Pack sizes

Tight-head drums, 190 kg  
Non-returnable containers, 950 kg  
Bulk, delivered by road tanker

#### BergaBest MCT Powder

##### Storage/shelf life

BergaBest MCT Powder has a shelf life of at least twelve months if stored in closed containers in a cool, dry place (max. 25 °C)

##### Pack sizes

Paper sacks with a polyethylene liner, 20 kg

### Quality management

Sternchemie is certified according to ISO 9001:2000 including HACCP.



“Safety creates trust. Our comprehensive quality management system ensures that our products meet the highest standards.”

Ulrike Burmeister, nutrition scientist, Quality Control Department.